Work Plan
Northern San Joaquin Valley Weed Management Area
Supplemental Project Proposal

Contract Lead Group and Contact Person:

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Executive Summary (MAX 10 lines):

This proposal will begin the eradication of 800 acres of salt cedar currently occupying key riparian locations on the San Joaquin River National Wildlife Refuge. These populations currently are high-risk for dispersal further north on the San Joaquin River and within the San Joaquin River Delta System. Several planned river surveys of upstream tributaries, in cooperation with CDFA and local partners, will identify any known source populations. Early detection will aid in preventing reintroduction to the treatment site prior to the next high water year. Coordinated outreach will occur throughout the watershed with multiple public outreach events annually. In addition, on-going funding is requested to continue the eradication efforts of Himalayan blackberry at the Turlock Lake State Recreation Area. Plants will be removed and monitored as part of an ongoing cooperative education component with local college students.

Your WMA's TOP THREE Accomplishments over the past 2 years (Max- 2 lines each):

1. Control of Arundo, edible fig, Himalayan blackberry, perennial pepperweed, yellow star thistle, and tree of heaven along selected stretches of lower 10 mi. of the Stanislaus River.

2. Preparation and widespread distribution of noxious weed publications, on-going outreach and education through booth displays and weed control workshops in the 3 county area.

3. Eradication of .65 ac of Himalayan blackberry and edible fig at a 14 acre Turlock Lake State Recreation Area along the Tuolumne River in coordination with CSU Stanislaus.

Summary of Methods Used (MAX 4 lines):

Weed treatments have been accomplished using a combination of manual, mechanical, chemical and grazing control techniques by volunteers, students, contractors and agency staff.

Outreach and education accomplished with workshops, booth displays at county and watershed events, UC Extension presentations as well as distribution of pamphlets and identification cards.

Summary of Net and Gross Acres:

Estimated Net acres or number of plants proposed to actually treat:
Project #1 will treat and/or retreat approximately 670 acres of low density salt cedar.

FY 2010/11 (Jan 1, 2011-June 30, 2011)	FY 2011/12 (July 1, 2011-June 30, 2012)	FY 2012/13 (July 1, 2012-Dec 31, 2012)
(100 acres treated)	(210 acres treated)	(310 ac re-treat/50 treat)

Gross acres or total ground proposed to survey/cover while conducting treatments:
Project #1 will cover/survey approximately 4000 acres on the southern part of the San Joaquin National Wildlife Refuge by ground and boat and the entire 14 acres the Turlock Lake State Recreation Area site by ground. In addition, we plan to survey up to 15 miles of upstream tributary by airboat in addition to approximately 1000 acres at the San Luis Wildlife Refuge and approximately 1000 acres at the Grasslands Ecological Area in Merced County by ground and boat survey. Both of the land surveys are upstream of the project site and potentially have source population of salt cedar.

Estimated Total Cost per acre for proposed treatments:
Project#1: $40,000/800ac =$50/ac

Summary of In-Kind Contributions toward the Project (MAX 4 lines):
In-kind contributions for planning, coordination, early detection riparian surveys, monitoring, outreach events and reporting. Site preparation and revegetation funding on the San Joaquin River National Wildlife Refuge for the affected areas is planned.

WMA Group: Northern San Joaquin Weed Management Area in Cooperation with East Stanislaus Resource Conservation District, California Department of Food and Agriculture, California State Parks, United States Fish & Wildlife Service and USDA Natural Resource Conservation Service Plant Materials Center

Project Title: Project 1 – Salt Cedar Eradication at San Joaquin River National Wildlife Refuge (SJRNWR)

Priority Topic Area Being Addressed (from request for proposal announcement):

Eradication: The estimated population targeted for eradication is a pioneer population that came in on the 2006 high water year. The source population is not yet known. Collaboration with USFWS, ACOE, Consumnes River Preserve, Tuolumne River Trust, River Partners and NRCS have revealed no known source populations occurring on the Stanislaus, Consumnes, Tuolumne, Merced or San Joaquin Rivers. Early detection river surveys are planned as an identified task to locate the upstream source via airboat and prevent spread prior to the next high water year.

High-value site: This site fits well into the definition of a high-value site. The site is currently located on USFWS land under perpetual easement with ongoing restoration to native riparian vegetation occurring. Multiple threatened and endangered species occur on or within proximity

of the refuge including Riparian brush rabbit, Riparian woodrat, Swaison's hawk, Yellow warbler, Tricolored blackbird, burrowing owl, least Bell's vireo, greater sandhill crane and aquatic species such as steelhead, spring-run Coho salmon and split tail. Upland species on property also include vernal pool fairy shrimp, tadpole shrimp and tiger salamander. This property is situated adjacent to large rivers that are hydrologically connected with their floodplains. With each flooding event, the propensity of weed dispersal is high. The uncontrolled growth of salt cedar will severely limit the success of the restoration, use of the site by native wildlife and negatively alter native soil chemistry.

Project Goal (6 LINES MAX):

Eradication of 800 estimated acres of low-density, immature salt cedar via basal bark and foliar herbicide treatments are planned on the USFWS San Joaquin River National Wildlife Refuge working with a USDA salt cedar specialist. Initial treatment and subsequent monitoring for successful kill/resprouting will occur. Upstream tributaries and lands will be surveyed via riparian airboat for source population(s) in coordination with watershed partnerships. Multiple public outreach and education events will ensue annually.

What are the project's long-term benefits and/or region-wide significance (6 LINES MAX):

The salt cedar is located at the confluence of three major rivers in the San Joaquin Valley river basin – the San Joaquin, Tuolumne and Stanislaus Rivers. Rapid treatment of the young stand of trees is imperative. Salt cedar occurring adjacent to the San Joaquin River and within the high water elevation increases the risk of spread by flooding to lower reaches in the San Joaquin River and Delta System. The protected wildlife refuge is home to multiple threatened and endangered species and harbors thousands of acres of at-risk, recently restored riparian habitat.

Project Objectives and Methods (1/2 page MAX):

Task/Objective 1:

Eradication

Targeted areas will be identified on site. Salt cedar will be treated using a combination of basal bark herbicide application and foliar sprays. The method of application will be matched with the site's conditions. For basal bark treatments Garlon4 will most likely be used with a minimum 35% concentration applied in the late fall or winter of 2010 and 2011. This timing will optimize the treatment efficacy as well as minimize interception by foliage and impacts to desirable species. For foliar applications Garlon3A will most likely be used during the active growing season. Work will be contracted to a QAC/QAL. Possibilities of involving the California Strike Team exist.

Task/Objective 2:

Monitoring/Surveying

Establishment of monitoring transects/plots as well as permanent photopoint locations will occur prior to treatment. Cover and density data will be collected in the late summer/fall of 2010 and 2011 to establish pre-treatment conditions. Collection of monitoring data 1 year following treatment in 2011 and 2012 will relay treatment efficacy and identify further treatment areas. Surveying of upper riparian tributaries will also be conducted to identify source populations including river surveys and ground surveys at San Luis Refuge and Grasslands Ecological Area in Merced County.

Task/Objective 3:

Outreach and Education

The NSJVWMA will participate in several planned public events including the Stanislaus River Salmon Festival, and the Riparian Brush Rabbit Festival, annually throughout the grant period. Salt cedar identification and biology will be presented as well as an awareness of our eradication project and treatment results. Multiple events in coordination with NRCS, USFWS, UCCE, ACOE, RCD's, State Parks and the Ag Commissioners Office throughout each year will also provide additional opportunities for outreach and education.

Performance measures (¼ page max):

How will you quantitatively monitor your project? ***Distinguish between year one goals versus long term goals following treatment.***

To quantitatively measure one-year results for the salt cedar treatment we will monitor using the line intercept method to document cover before and after treatment. Estimation of density will also be determined before and after treatment. Protocols and worksheets from the BLM and TNC publication "Measuring and Monitoring Plant Populations" will be used.

The treated area will be mapped before treatment and transects will be established within this acreage. Photopoint locations will be georeferenced and mapped.

Treatment will be qualitatively measured using permanent photopoint monitoring throughout the treatment area. This will be conducted to document treatment effectiveness and population trend as well as to develop visual references for use during outreach events.